

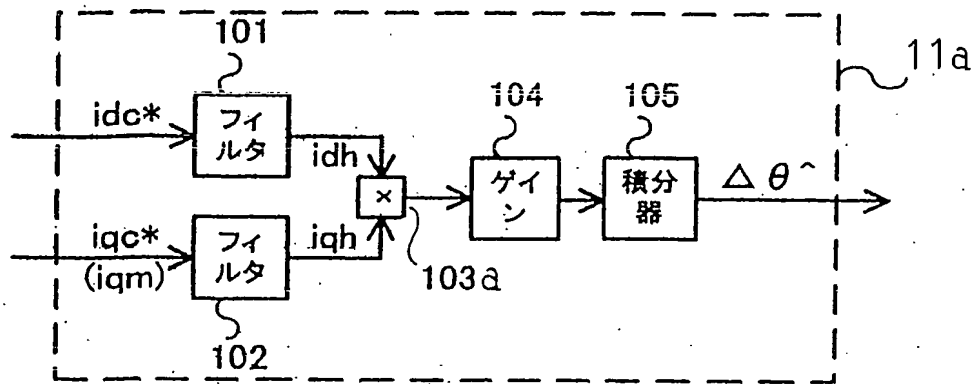
[FIG. 1]

- 1: VELOCITY CONTROL UNIT
- 2: CURRENT CONTROL UNIT
- 3: dq/uvw COORDINATE CONVERTING UNIT
- 4: INVERTER
- 5: MOTOR
- 6: uvw/dq COORDINATE CONVERTING UNIT
- 7: VELOCITY CALCULATION UNIT
- 8: DETECTOR
- 11: AXIAL MISALIGNMENT DETECTING UNIT

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Fig. 2



[FIG. 2]

101: FILTER

102: FILTER

104: GAIN UNIT

105: INTEGRATOR

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Fig. 3

Figure 1 consists of two parts. The top part is a vector diagram in the qm - dm plane. It shows the q -axis (qm) and d -axis (dm) with their respective error signals: iqh (q-axis current error) and idh (d-axis overlap signal). The torque component current error is labeled iqm . The angle between the q -axis and the dq -axis is $\Delta\theta$. The bottom part is a waveform diagram showing the time-varying signals idh and iqh as sinusoidal waves.

[FIG. 3 (a)]

- a. i_{qh} : q-axis CURRENT ERROR
- b. i_{dh} : d-AXIS SUPERIMPOSED SIGNAL
- c. i_{qm} : TORQUE CURRENT ERROR

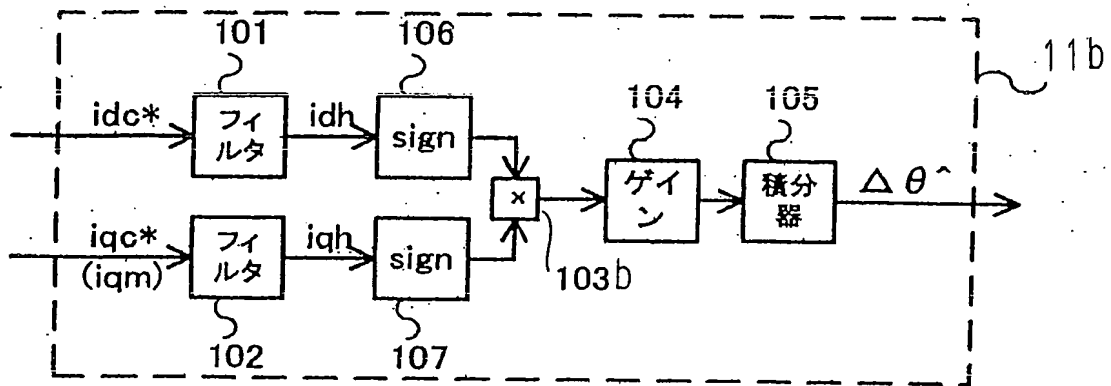
[FIG. 3 (b)]

- a. i_{qm} : TORQUE CURRENT ERROR
- b. i_{dh} : d-AXIS SUPERIMPOSED SIGNAL
- c. i_{qh} : q-axis CURRENT ERROR

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Fig. 4



[FIG. 4]

101: FILTER

102: FILTER

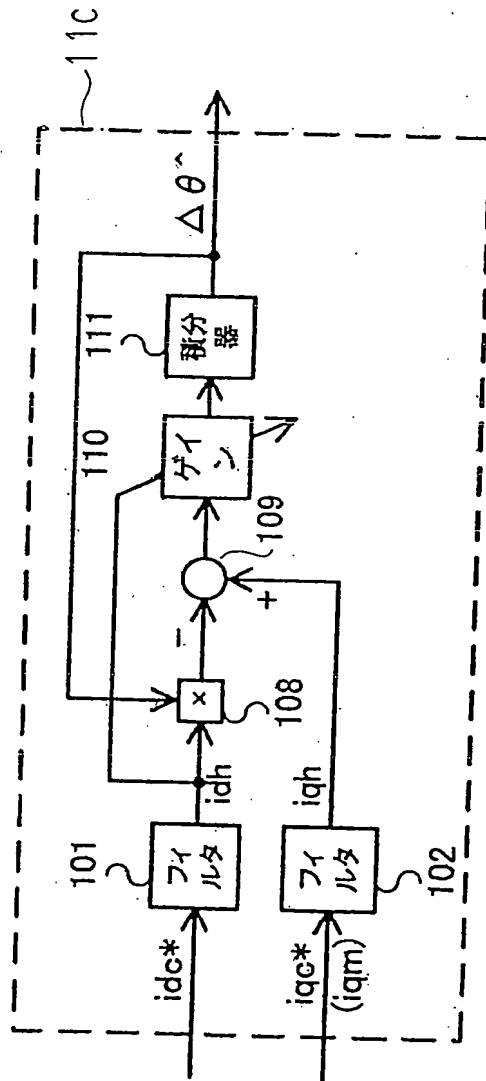
104: GAIN UNIT

105: INTEGRATOR

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Fig. 5



[FIG. 5]

101: FILTER

102: FILTER

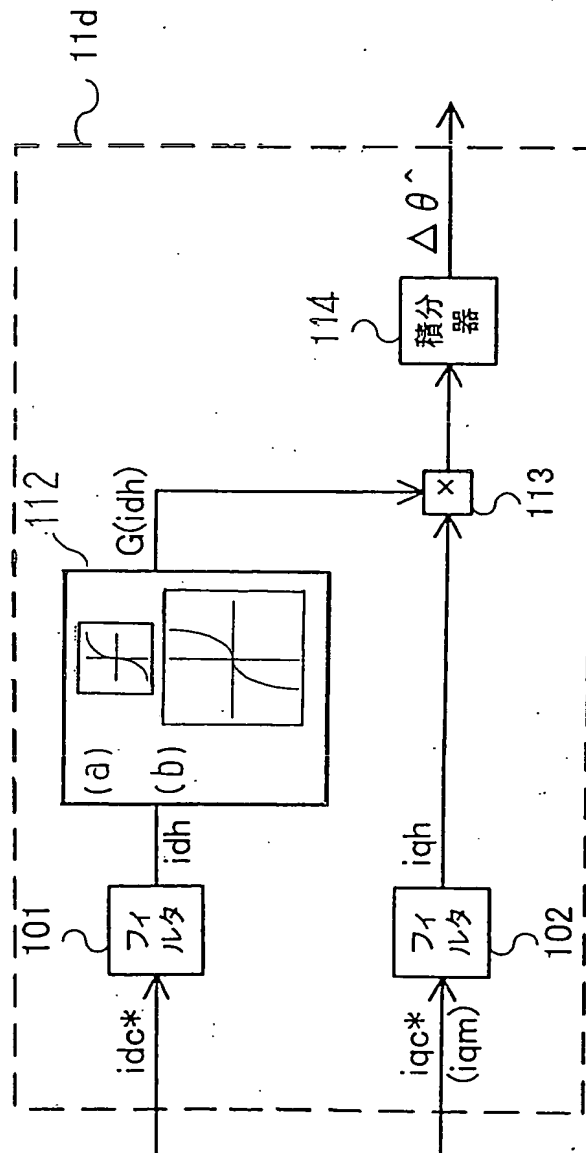
110: GAIN UNIT

111: INTEGRATOR

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Fig. 6



[Fig. 6]

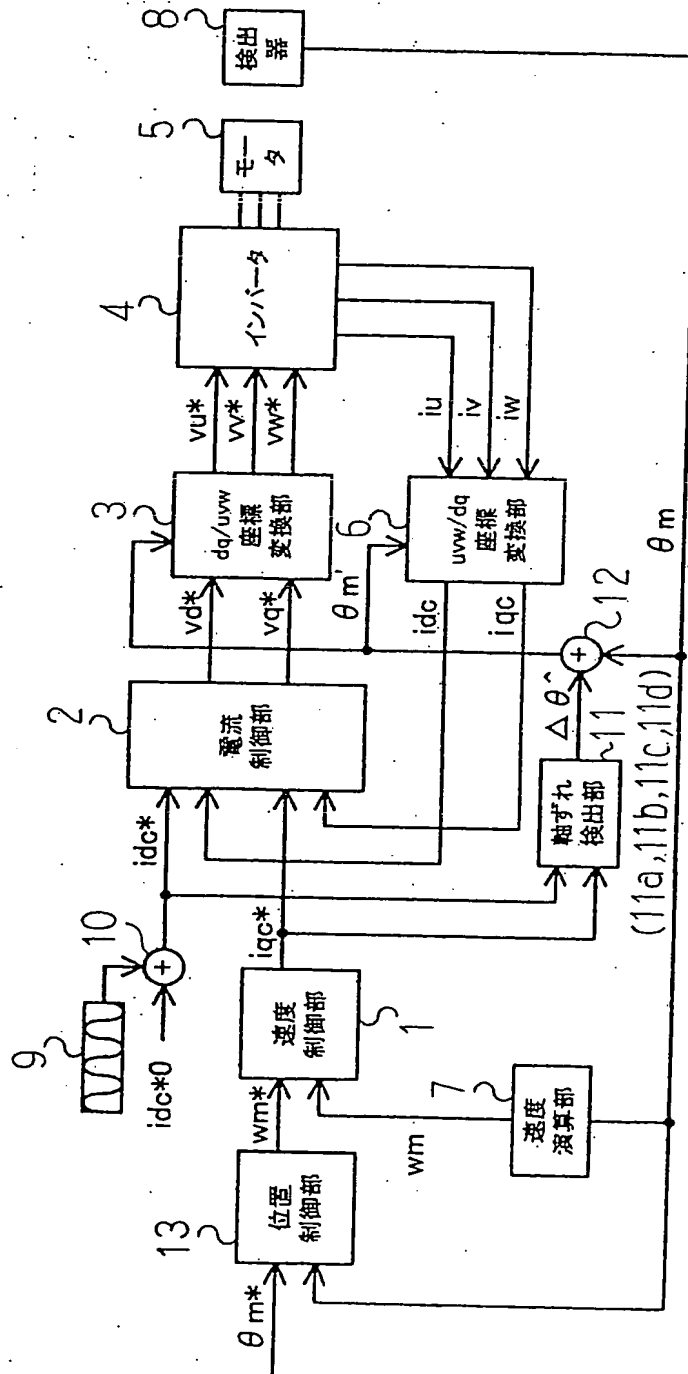
101: FILTER

102: FILTER

114: INTEGRATOR

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第7図 *Fig. 7*



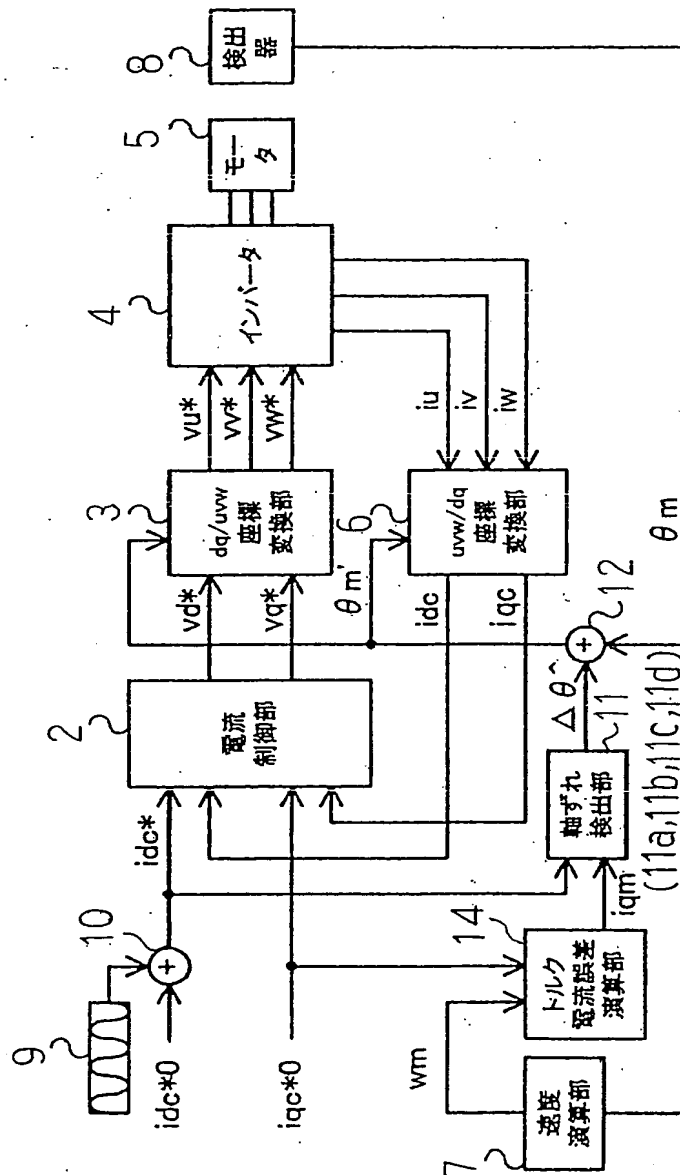
[FIG. 7]

- 1: VELOCITY CONTROL UNIT
- 2: CURRENT CONTROL UNIT
- 3: dq/uvw COORDINATE CONVERTING UNIT
- 4: INVERTER
- 5: MOTOR
- 6: uvw/dq COORDINATE CONVERTING UNIT
- 7: VELOCITY CALCULATION UNIT
- 8: DETECTOR
- 11: AXIAL MISALIGNMENT DETECTING UNIT
- 13: POSITION CONTROL UNIT

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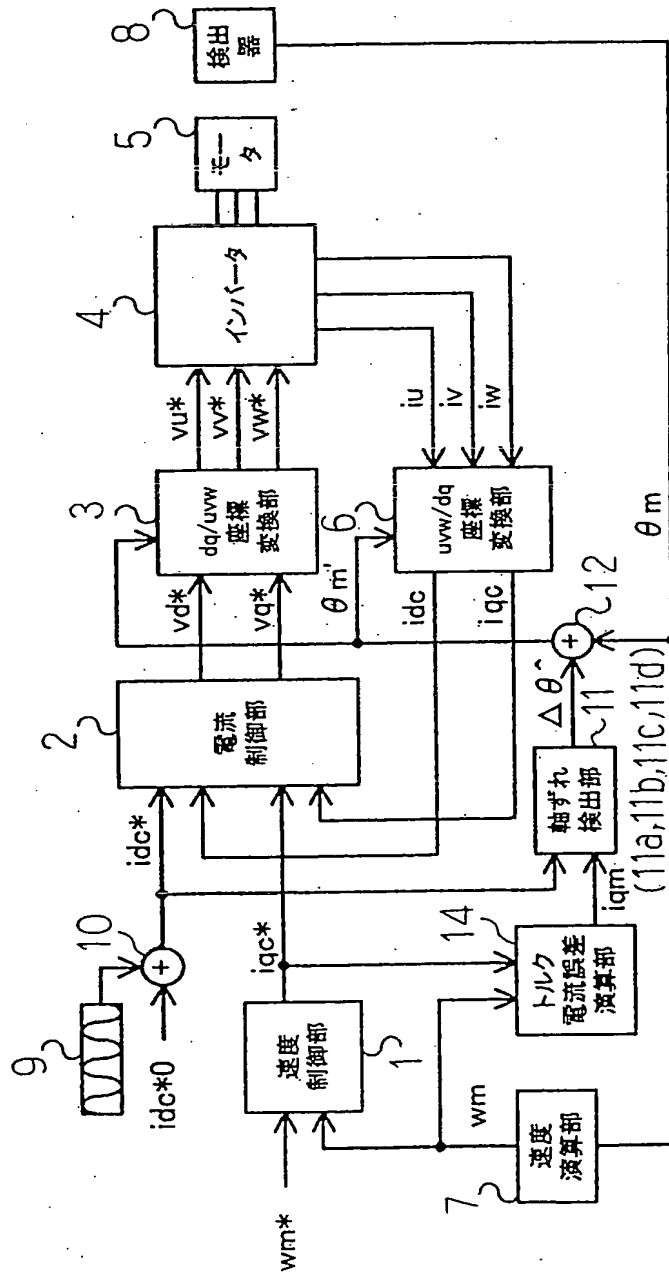
Fig. 8



[FIG. 8]

- 2: CURRENT CONTROL UNIT
- 3: dq/uvw COORDINATE CONVERTING UNIT
- 4: INVERTER
- 5: MOTOR
- 6: uvw/dq COORDINATE CONVERTING UNIT
- 7: VELOCITY CALCULATION UNIT
- 8: DETECTOR
- 11: AXIAL MISALIGNMENT DETECTING UNIT
- 14: TORQUE CURRENT ERROR CALCULATION UNIT

Fig. 9



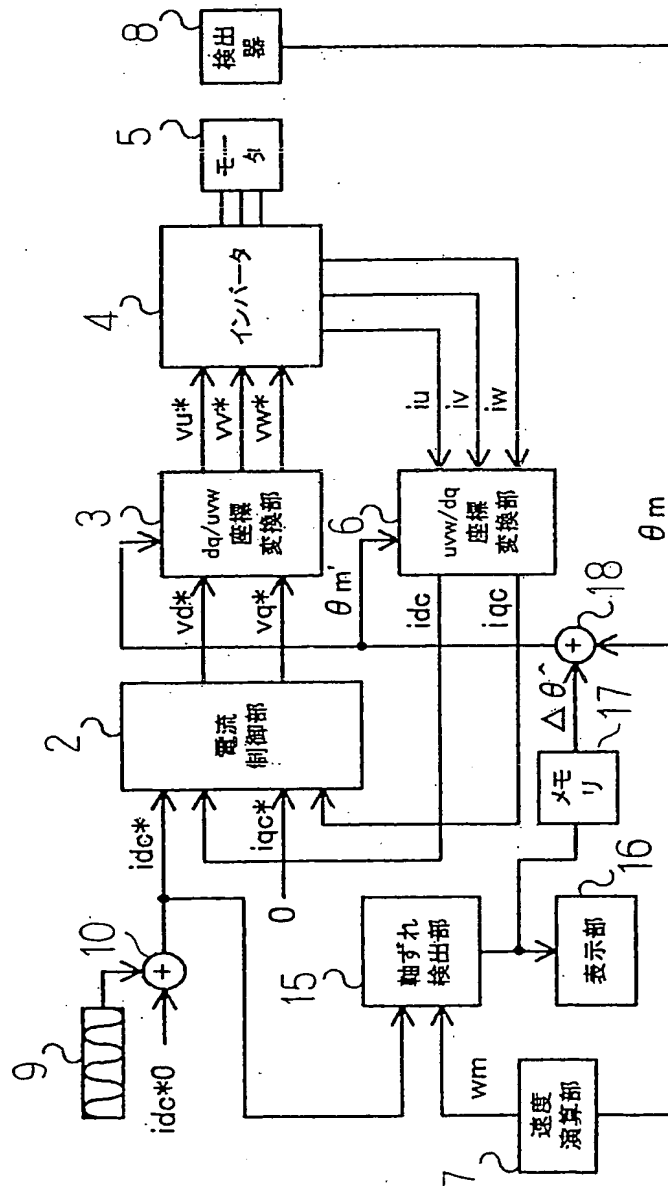
[FIG. 9]

- 1: VELOCITY CONTROL UNIT
- 2: CURRENT CONTROL UNIT
- 3: dq/uvw COORDINATE CONVERTING UNIT
- 4: INVERTER
- 5: MOTOR
- 6: uvw/dq COORDINATE CONVERTING UNIT
- 7: VELOCITY CALCULATION UNIT
- 8: DETECTOR
- 11: AXIAL MISALIGNMENT DETECTING UNIT
- 14: TORQUE CURRENT ERROR CALCULATION UNIT

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第10図

Fig. 10



[FIG. 10]

- 2: CURRENT CONTROL UNIT
- 3: dq/uvw COORDINATE CONVERTING UNIT
- 4: INVERTER
- 5: MOTOR
- 6: uvw/dq COORDINATE CONVERTING UNIT
- 7: VELOCITY CALCULATION UNIT
- 8: DETECTOR
- 15: AXIAL MISALIGNMENT DETECTING UNIT
- 16: DISPLAY UNIT
- 17: MEMORY